

Dr. F. W. Barry's Report to the Local Government Board on the General Sanitary Condition of the Willington Quay Urban District.

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GEORGE BUCHANAN,
Medical Department,
August 22, 1883.

Area, 420 acres; rateable value (1882), 19,470*l.*
Population: (1871), 4,096; (1881), 4,974.
Inhabited houses (1881), 357.
Persons per house (1881), 13·9; persons per acre (1881), 11·8.

I.—*Description.*—The Willington Quay District is situated to the south of the Tynemouth Union, and forms part of the Willington Quay Township, in the parish and registration sub-district of Wallsend. It is bounded on the north by the rural portion of the township, from which it is separated by the high road between Newcastle and North Shields, to the west by the Wallsend Urban Sanitary District, to the east by the Tynemouth and Howdon Urban Sanitary Districts, and to the south by the River Tyne.

The subsoil is nearly all artificial, and consists of the ballast discharged from wooden ships in bygone days. This ballast forms a high ridge, a short distance from and parallel with the river and most of the houses lie in the space between, though there are extensions at the east and west extremities. The ridge has been cut through in one or two places. The population has increased 21·5 per cent. between the censuses of 1871 and 1881, and is now estimated at over 5,000. The industries are alum, lead, cement, and shipbuilding works.

II.—*Dwelling Accommodation.*—The houses, as a rule, appear to be of a fair class; but there is some old property, notably Keelman's Row, which is in a very bad condition. Here the lower rooms are below the level of the ground, and there is an open ditch running along the back of the houses, which eventually passes under one of them. The houses themselves are said to be overcrowded. I understand, however, that the Local Board are at present making an effort to get these removed. A considerable number of the houses are on the "flat" system. In Stephenson Street many of the houses are built up close to the ballast hills, there being but a few feet between, in which are situated enormous privy middens, which foul the air and cannot be emptied except through the houses; in fact, so confined is the space that some of the middens are actually against, if not under, the houses. Proper ventilation about these dwellings is also naturally much impeded.

III.—*Water Supply.*—The district is supplied throughout from the Newcastle and Gateshead Waterworks. The supply is said to be constant, but there is no arrangement by which fresh air can freely enter the mains during occasional intermission.

IV.—*Sewerage and Drainage.*—The drainage is effected by means of a brick main sewer having a section of 3 feet by 2 feet 3 inches. It has its outfall into the River Tyne at the ferry landing at the end of Tyne Street. The branch sewers are said to consist of 18-inch sanitary pipes. The ventilation is at present defective, but is being improved by the Sanitary Authority. The street gullies are used for purposes of ventilation, and the Local Board are replacing, by untrapped street gullies, the series of dumb wells or cesspools which at present exist under the pavement, and through which the street drainage has hitherto been passed. The sewers are not flushed, nor are there any special means for flushing, except by the laying on of hose from the hydrant to a manhole. There are, as a rule, no connexions between the interior of dwellings and the house drains, the sinks which alone are connected with them being out of doors. In a few instances the ash pits have been drained into the public sewers, but I understand from the Surveyor that this is not now allowed by the Sanitary Authority, and that wherever such communications have been made they are being gradually done away with. A portion of the sewage is passed into the culvert which forms the boundary between the Howdon and Tynemouth Districts.

V.—*Excrement and Refuse Disposal.*—There are only one or two waterclosets, properly so called, in the town, but recently two or three of the modified form known as “Fowler’s closets” have been erected. The waste pipe from the slop sink is connected with the pans of these closets, and it is only when slops are thrown down that flushing is effected. It is much to be regretted that the Local Board have sanctioned this form of closet, for unless a very great amount of attention is bestowed upon it, the branch drain is liable to become stopped up, and there is also a danger of the retention of the excrement in both the pan and house drain for an undue length of time, with the consequent nuisance from decomposition. With the above exceptions the dwellings are throughout provided with midden privies, and these are, as a rule, so constructed as to ensure nuisance and injury to health. The privies are so situated with regard to the middens that no proper mingling of ashes or dry refuse with the excreta is possible. The middens are often sunk below the level of the surrounding soil, and are not only unroofed, but the privy roofs drain into them, thus ensuring the wetness and consequent rapid decomposition of the contents. As already noticed some of these are situated in the narrow space between the houses and the ballast hills, either close to or in actual contact with the former, thus favouring soakage into their foundations. Some of the privies are also in a very dilapidated condition. The new houses have, as a rule, one privy to two tenants. Some of these middens are very large, and some that have been comparatively recently erected have a capacity of nearly 150 cubic feet. In some instances efforts have been made to obviate the nuisances arising from this form of privy by roofing and draining the midden, but, as might have been expected, with but little advantage. Some, however, which have been recently built in George Street were found to be quite free from nuisance. In these the midden consisted only of the space beneath the seat, which was fitted with hinges, so that it could be lifted up and the ashes thrown in directly upon the night soil. By this means dryness of contents, with freedom from appreciable decomposition, and increased facility in scavenging are ensured. The capacity of these middens is 11 cubic feet. The scavenging is undertaken by the Sanitary Authority, the middens being emptied at irregular intervals when full, and the contents disposed of gratis to farmers. Both the late and present Medical Officer of Health have recommended the substitution of pail-closets and a systematic method of removal of refuse.

The total cost of scavenging in 1881–82 was 243*l.*

VI.—*Slaughter-houses, &c.*—There are no registered or licensed slaughter-houses in the district, the cattle being slaughtered, in accordance with the custom prevailing in the Tyneside towns, in the butchers’ shops. These are, in many instances, in direct communication with the dwelling-house. They are, as a rule, furnished with cement floors, but there is not generally any water in the shops. The offal, &c. is thrown into the middens. There are six butchers’ shops in Willington Quay.

There are no common lodging-houses in the district, but a considerable number of persons are said to take as lodgers the artizans, &c. engaged in the shipbuilding and other works, this leading in some instances to overcrowding.

VII. *General Sanitary Administration.*—The Local Government Act was adopted in Willington Quay in 1863. Since that date the following loans have been sanctioned:—

			£
1864	-	-	2,000.
1866	-	-	1,000.
1879	-	-	1,050.
1882	-	-	300.
			Public improvements. Do. Private improvements. Providing a cemetery.

The present *Medical Officer of Health* was only appointed in September 1882. He receives a salary of 40*l.* per annum, a moiety of which is paid out of the parliamentary grant. Since his appointment he has been supplied with returns of the deaths occurring in this district. These are only received monthly, and are not supplemented by immediate notice of a death from infectious disease. In the absence, however, of any means for isolation or for efficient disinfection or of any mortuary, the action of this officer, as far as preventing the spread of infection is concerned, is necessarily much restricted. He has apparently made himself acquainted with the sanitary circumstances of his district. He makes a monthly report to the Local Authority.

The *Inspector of Nuisances* receives a salary of 60*l.* per annum, half of which is repaid from the parliamentary grant. He is also surveyor to the Authority, and receives an additional 60*l.* per annum in this capacity. He thoroughly understands



his duties, but much of his time is taken up with the mere repression of nuisances from midden privies, &c., which are sure to recur so long as the present faulty construction is permitted.

The Board has since 1863 possessed a code of byelaws with regard to (1) transaction of business, (2) new streets and buildings, (3) removal of nuisances, &c., and (4) common lodging-houses. The byelaws with regard to new streets and buildings are extremely indefinite in what is prescribed, very deficient in numerous respects, and very one-sided, inasmuch as the Local Board may demand what they choose, regardless of whether it is necessary or proper, and the person affected has no appeal. As examples of the deficiencies of these byelaws, I may refer to the fact that any regulations as to space in front of houses, provision of damp course, and many other essential matters are conspicuous by their absence, whilst the indefiniteness of the regulations with regard to thickness of walls, ventilation of drainage, construction of waterclosets, privies, ash pits, &c., when compared with the requirements laid down in the model byelaws of the Local Government Board, is remarkable.

VIII.—*Mortality Statistics.*—In the subjoined table will be found the mortality statistics for the Urban Sanitary District of Willington Quay for the ten years ending 1882.

MORTALITY STATISTICS for the URBAN SANITARY DISTRICT of WILLINGTON QUAY,
for the 10 Years, 1873–1882.

Year.	Esti- mated Popu- lation.	Total Deaths from all causes registered in the District.	Total Deaths corrected for Union Workhouse.	Corrected Death Rate per 1,000 living.	Deaths from								Death Rate from Diseases in Columns 5–11 per 1,000 living.	Births.	Deaths under 1 Year of Age. per 1,000 Births.
					Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	“Fever.”	Diarrhoea, Dysentery, &c.				
Columns.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1873	4,239	89	91	21·4	—	2	25	—	1	—	7	8·2	196	18	92
1874	4,324	84	86	19·8	—	3	11	—	1	—	6	5·5	155	22	142
1875	4,411	82	86	19·5	—	—	1	—	4	2	5	2·7	179	23	128
1876	4,501	70	72	16·0	—	1	6	—	—	2	4	2·8	171	25	146
1877	4,591	90	92	20·0	—	—	3	1	—	2	1	1·5	185	29	157
1878	4,684	87	92	19·6	—	—	3	1	1	5	8	3·8	190	24	126
1879	4,779	76	82	17·2	—	—	2	—	—	5	2	1·8	184	22	120
1880	4,875	120	126	25·8	—	9	7	—	1	3	4	4·9	225	36	160
1881	4,974	80	84	16·9	—	1	13	—	1	1	9	5·0	235	25	106
1882	5,074	102	102	21·5	—	1	4	—	2	—	6	2·5	225	25	111
Mean for 10 years, 1873–1882	4,645	88	92	19·8	—	3·66	16·14	0·64	2·15	4·95	11·20	3·9	194	25	129
Mean of 10 years, 1873–1882	Wallsend Registration Sub-district - - -		20·2	—	2·88	17·02	0·88	3·68	4·00	8·08	3·6	—	—	—	135
	Tynemouth Registration District - - -		22·0	0·05	2·48	13·25	0·72	4·77	4·42	10·16	3·6	—	—	—	155
	England and Wales -		20·8	0·79	3·76	6·94	1·27	5·03	4·22	8·45	3·0	—	—	—	145

Rates per 10,000 of the population per annum.

The mean general death-rate from all causes was 19·8 per 1,000 living, and it was at its lowest in 1876, when it was 16 per 1,000. The mean death-rate from fever, which was enteric fever, has been high, as compared with the sub-district of which it forms a part, namely, 4·9 per 10,000 living. It was very high, namely, 10·5 per 10,000 in 1878 and 1879, but since that date has diminished.

Whether the mortality from this cause will increase or diminish in future will probably depend to a great extent on the action of the authority in dealing with the filth receptacles, which from their construction favour the storage of excremental

nuisances, which poison the air breathed. The mortality from diarrhoea is also in excess of that prevailing in the rest of the Registration district, and considerably in excess of that of England and Wales. This fatality no doubt depends to a great extent upon the same conditions as does enteric fever. Scarlet fever was epidemic in 1873, 1874, and 1881, during which years it reached as high as 59, 25, and 26 per 10,000 living respectively. This unusual prevalence was doubtless favoured by the absence of any means for isolation or for efficient disinfection in the district.

FRED. W. BARRY.

June 1883.

RECOMMENDATIONS.

I. In order to arrest the progress of dangerous infectious diseases, it is of the first importance that the Authority should have in readiness—(1) some means for the isolation of persons found suffering from infectious diseases, and who cannot be properly lodged and accommodated in their own homes, (2) some apparatus for the efficient disinfection of infected bedding, clothing, &c., and (3) a proper mortuary. These provisions may possibly be best adopted in conjunction with one or more of the adjoining sanitary districts.

II. The Sanitary Authority should at once take into consideration what method for the disposal of excrement and refuse will be best adapted to the circumstances of their district, in the place of the midden privies, which, as at present constructed, are a source of nuisance of the gravest kind and cannot fail to be injurious to health. If any form of privy be retained, it should be so constructed and managed that nothing can escape from the privy pit into the neighbouring soil; that thorough mingling of ashes with excreta, dryness of contents, and their frequent removal should be ensured, conditions which will be most easily obtained by placing a movable receptacle under the privy seat. Where efficient sewers and an adequate water supply are at hand, water-closets may be used with advantage in many cases, particularly where the closets are necessarily placed near dwelling-houses. Closets unprovided with means for ample flushing should be absolutely prohibited.

All privies which, by construction, situation, or otherwise, are a source of nuisance should be dealt with as such.

III. The Sanitary Authority should press forward the provision of their sewers, and provide adequate means of ventilation and flushing.

IV. Proceedings should be taken to have all dwellings which are nuisances, and, as such, unfit for habitation, closed, either permanently or until they have been made fit for use.

V. Means should be adopted to provide for the free entrance of air into the water mains during any periods of intermission which may occur, either from repairs or otherwise.

VI. All existing slaughter-houses should be registered, and all new ones should be licensed. They should all be subjected to efficient inspection and control.

The Authority should also consider the expediency of the provision of a public slaughter-house.

VII. The returns of deaths now forwarded to the Medical Officer of Health once a month should be supplemented by an immediate notice on the occurrence of a death from infectious disease.

VIII. With a view to the adoption of certain of the above recommendations, and to the general sanitary improvement of the district, the existing byelaws should be revised, and any such revision should be based upon the model code issued by the Local Government Board.

Byelaws for the regulation of slaughter-houses should be included in the new code.